Satellite P50-A Detailed Product Specification[1]

Model Name: P50-AST2NX2	Part Number: PSPMGU-00H00C	UPC: 022265536988

Operating System C1 2
- Windows 8

Processor[3] and Graphics[4]
- Intel® Core™ i7-4700MQ Processor
  - (6M Cache,up to 3.4GHz)with Intel® Turbo BoostTechnology 2.0
- Mobile Intel® HM86 Express Chipset
- Mobile Intel® HD graphics with shared graphics memory

Memory[5]
- Configured with 12GB DDR3L 1600MHz (max 16GB)
- 2 main memory slots. Both slots are occupied.

Storage Drive[6]
- 1TB (5400 RPM) Serial ATA hard disk drive
- TOSHIBA Hard Drive Impact Sensor (3D sensor)

Fixed Optical Disk Drive[7]
- DVD SuperMulti drive supporting 11 formats
  - Maximum speed and compatibility: CD-ROM (24x), CD-R (24x), CD-RW (16x), DVD-ROM (8x), DVD-R (8x), DVD-R DL (6x), DVD-RW (6x), DVD+R (8x), DVD+R DL (6x), DVD+RW (8x), DVD-RAM (5x).

Display[8]
- 15.6" diagonal widescreen TruBrite® TFT LCD display at 1920 x 1080 native resolution (FHD)
  - Native support for 1080p content
  - 16:9 aspect ratio
  - LED backlit
- Intel® Wireless Display Ready[9]

Sound
- Built-in harman/kardon® stereo speakers
- DTS Studio Sound™

Input Devices
- Premium Frameless Raised Tile Keyboard with 10-Keypad (black)
  - LED Backlit
- Buttonless touchpad pointing device with multi-touch control
- One Touch Function Keys

Communications
- HD webcam and stereo microphone
- 10/100/1000 Ethernet
- Intel® Centrino® Wireless-N 7260, 2x2 BGN+BT[10]
- Bluetooth® v4.0

Expandability
- Memory Card Reader
  - Secure Digital, Secure Digital High Capacity, Secure Digital Extended Capacity, Mini SD, Micro SD, Multi Media Card [shared slot; may require adapter for use]

Ports
- Video
  - RGB (monitor) output port
  - HDMI®with 4K Ultra HD output capability
- Audio
  - Microphone input port with Toshiba Sleep and Music[11]
  - Headphone output port
- Data
  - 2 USB 3.0 ports[12] (1 with USB Sleep and Charge[13]) and 2 USB 2.0 ports
  - RJ-45 LAN port
- Security
  - Slot for Security Lock

Physical Description
- Prestige Silver in Brushed Aluminum
- Dimensions (W x D x H): 15.2" x 9.9" x 1.1"/1.2" (with feet)
- Weight: Starting at 5.3 lbs., depending upon configuration[14]

Power Supply
- 90W (19V 4.74A) 100-240V/50-60Hz AC Adapter
- Weight : Starting at 0.75 lbs.

Battery[15]
- 4 cell/43Wh Lithium Ion battery pack

Software C1 16
- Toshiba Software and Utilities
  - TOSHIBA App Place
  - TOSHIBA BookPlace™
  - TOSHIBA Desktop Assist
  - TOSHIBA Disc Creator
  - TOSHIBA Bluetooth Stack for Windows
  - TOSHIBA eco Utility™
  - TOSHIBA HDD Protection
  - TOSHIBA HW Setup Utility
  - TOSHIBA Media Player by sMedio Truelink+
  - TOSHIBA Maintenance Utility
  - TOSHIBA Recovery Disc Creator
  - TOSHIBA Service Station
  - TOSHIBA Sleep Utility
  - TOSHIBA Start
  - TOSHIBA Password Utility
  - TOSHIBA Resolution+ Upconvert Technology for Media Player[17]
  - TOSHIBA Video Player
- Third-party Software
  - Internet Explorer® 10
  - Intel® Wireless Display[18]
  - Norton™ PC Checkup
  - Origin powered by EA Game Console
  - WildTangent® Games Console
  - DTS Studio Sound™
- Special Offers and Trial Software
  - Norton™ Internet Security (30-day trial subscription)
  - 1 month trial for new Office 365 customers[19]
  - Norton™ Online Backup (30-day Trial)
  - Norton™ Anti-Theft (30-day Trial)

1 YEAR STANDARD LIMITED WARRANTY[20]

Environmental Specifications
- This product is RoHS[21] compatible
- ENERGY STAR® Qualified
- EPEAT® Gold Rated

	Operating	Non-operating
Temperature[22]	5° to 35° C	-20° to 60° C
Relative Humidity (non-condensing)	20% to 90%	10% to 95%
Thermal Gradient	15° C per hour (max)	20° C per hour (max)
Altitude (relative to sea level)	0 to 10,000 meters	-60 to 40,000 meters
Shock	10G	60G
Vibration	0.5G	1.0G

Service Upgrades and Extensions

Toshiba offers many different enhanced services such as SystemGuard®, On-Site Repair, and ServiceExpress to provide additional support to your

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notebook PC. For a full description and complete list of programs and program terms and conditions, please visit www.support.toshiba.com.

Accessories

For additional and most updated accessories, please visit www.accessories.toshiba.com

Memory Upgrade

Part Number	Description

Power

Part Number	Description
PA5044U-1ACA	Toshiba 45W Global AC Adapter(19V, 2.37A)

Expansion

Part Number	Description
PA5082U-1PRP	dynadock V3.0 Universal USB 3.0 Docking Station
PA3927U-1PRP	dynadock U3.0 Universal USB 3.0 Docking Station

Bluetooth/Wireless

Part Number	Description
PA3847U-1ETB	Toshiba Bluetooth Laser Mouse, Gloss Black
PA3847U-1ETC	Toshiba Bluetooth Laser Mouse, Magnesium Black

Carrying Case

Part Number	Description
PA1463U-1SP6	Toshiba 16" Metropolitan Carrying Case (Fits up to 16")
PA1452U-1BS6	Toshiba 16" Extreme Back Pack, Black&Blue(Fits up to 16")
PA1448U-1RS6	Toshiba 16" Envoy Roller Case (Fits up to 16")

Subject to Change

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Return Policy

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[C1] **64-bit computing:**
64-bit computing requires that the following hardware and software requirements are met:
- 64-bit Operating System
- 64-bit CPU, Chipset and BIOS (Basic Input/Output System)
- 64-bit Device drivers
- 64-bit applications

Certain device drivers and/or applications may not be compatible with a 64-bit CPU and therefore may not function properly. See "Detailed Specs" for more information.

[1] **Product Series Legal Footnote**. The product specifications and configuration information are designed for a product Series. Your particular model may not have all the features and specifications listed or illustrated. For more detailed information about the features and specifications on your particular model, please visit Toshiba's Web site at pcsupport.toshiba.com.

Product Offering Legal Footnote. Toshiba America Information Systems, Inc. reserves the right to modify or withdraw this offer at anytime without notice

[2] **Operating System**. Also see ***64-Bit Computing*** Legal Footnote, if applicable.

Certain Microsoft® software product(s) included with this computer may use technological measures for copy protection. IN SUCH EVENT, YOU WILL NOT BE ABLE TO USE THE PRODUCT IF YOU DO NOT FULLY COMPLY WITH THE PRODUCT ACTIVATION PROCEDURES. Product activation procedures and Microsoft's privacy policy will be detailed during initial launch of the product, or upon certain reinstallations of the software product(s) or reconfigurations of the computer, and may be completed by Internet or telephone (toll charges may apply).

Some software may differ from its retail version (if available), and may not include user manuals or all program functionality.

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[3] **Processor (Central Processing Unit)**. Also see ***64-Bit Computing*** Legal Footnote, if applicable.

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CPU performance in your computer product may vary from specifications under the following conditions:

1. use of certain external peripheral products
2. use of battery power instead of AC power
3. use of certain multimedia, computer generated graphics or video applications
4. use of standard telephone lines or low speed network connections
5. use of complex modeling software, such as high end computer aided design applications
6. use of several applications or functionalities simultaneously
7. use of computer in areas with low air pressure (high altitude >1,000 meters or >3,280 feet above sea level)
8. use of computer at temperatures outside the range of 5°C to 30°C (41°F to 86° F) or >25°C (77°F) at high altitude (all temperature references are approximate and may vary depending on the specific computer model – please visit the Toshiba website at www.pcsupport.toshiba.com for details).

CPU performance may also vary from specifications due to design configuration.

Under some conditions, your computer product may automatically shut-down. This is a normal protective feature designed to reduce the risk of lost data or damage to the product when used outside recommended conditions. To avoid risk of lost data, always make back-up copies of data by periodically storing it on an external storage medium. Use your computer product only under recommended conditions. Read additional restrictions under "Environmental Conditions" in your product "Detailed Specs." Contact Toshiba Technical Service and Support for more information.

[4] **Graphics (Graphics Processing Unit)**. GPU performance may vary depending on product model, design configuration, applications, power management settings and features utilized. GPU performance is only optimized when operating in AC power mode and may decrease considerably when operating in battery power mode.

Total Optional Graphics Memory is the total of, as applicable, Dedicated Video Memory, System Video Memory and Shared System Memory. Shared System Memory will vary depending on system memory size and other factors.

[5] **Memory (Main System)**. Part of the main system memory may be used by the graphics system for graphics performance and therefore reduce the amount of main system memory available for other computing activities. The amount of main system memory allocated to support graphics may vary depending on the graphics system, applications utilized, system memory size and other factors. Computers configured with a 32-bit operating system can address up to 3GB of system memory. Only computers configured with a 64-bit operating system can address 4 GB or more of system memory.

[6] **Storage Drive (Internal HDD Capacity)**. One Gigabyte (GB) means 109 = 1,000,000,000 bytes and One Terabyte (TB) means 1012 = 1,000,000,000,000 bytes using powers of 10. The computer operating system, however, reports storage capacity using powers of 2 for the definition of 1 GB = 230 = 1,073,741,824 bytes and 1TB = 240 = 1,099,511,627,776 bytes, and therefore shows less storage capacity. Available storage capacity will also be less if the computer includes one or more pre-installed operating systems, such as Microsoft Operating System and/or pre-installed software applications, or media content. Actual formatted capacity may vary.

[7] **Optical Drive**. Due to manufacturing and quality variations in third party optical media (e.g., CD or DVD) or optical media players/recorders, in certain cases, your Toshiba optical drive may not record on certain optical media that bear the applicable logo, or playback optical media recorded by other PCs or optical media recorders. Additionally, certain optical media recorded on your optical drive may not playback or operate properly on other PCs or optical media players. These problems are not due to any defect in your Toshiba PC or optical drive. Please refer to your PC's product specification for listing of specific format compatibilities.

Recording or viewing of certain optical media may be limited or prevented in accordance with applicable copy protection standards.

[8] **Display**. Small bright dots may appear on your screen display when you turn on your PC. Your display contains an extremely large number of thin-film transistors (TFT) and is manufactured using high-precision technology. Any small bright dots that may appear on your display are an intrinsic characteristic of the TFT manufacturing technology. Over a period of time, and depending on the usage of the computer, the brightness of the screen will deteriorate. This is also an intrinsic characteristic of the screen technology. When the computer is operated on battery power, the screen with dim and you may not be able to increase the brightness of the screen while on battery power.

[9] **Intel® Wireless Display.** Copy protection technology, if any, associated with the content may prevent or limit viewing of content.

[10] **Wireless** May require purchase of additional software, external hardware, or services. Transmission speeds may vary. Certain optional features within the wireless-n specifications (if available on your system) may not be supported..

[11] **Sleep & Music:** In this mode, the headphone jack and mute functions are disabled. The volume and sound quality will diminish as the speakers not tuned in Windows® mode. Use the volume control on your audio device to adjust sound. Audio line-in cable is not included

[12] **USB 3.0.** 5Gbps is the maximum theoretical interface transfer rate per the specifications of the Universal Serial Bus 3.0. Actual transfer rate will vary depending on your system configuration and other factors.

[13] **USB Sleep & Charge.** The "USB Sleep & Charge function" may not work with certain external devices even if they are compliant with the USB specification. In those cases, turn the power of the computer ON to charge the device.

[14] **Weight**. Weight may vary depending on product configuration, vendor components, manufacturing variability and options selected.

[15] **Battery Life Rating**.
Measured by MobileMark® 2012 for models preinstalled with Microsoft® Windows 8.

- Benchmark rules for Mobile Mark™ 2012: Wireless connectivity = On, Screen brightness = 150nits, Predefined updated workloads.

Details of MobileMark® 2012 testing protocols are available at **www.bapco.com** MobileMark is a trademark of the Business Applications Performance Corporation.

Rating is for comparison purposes only, and does not indicate the battery life that will be obtained by any individual user. Actual battery life may vary considerably from specifications depending on product model, configuration, applications, power management settings and features utilized, as well as the natural performance variations produced by the design of individual components. The battery life rating is only achieved on the select models and configurations tested by Toshiba under the specific test settings at the time of publication and is not an estimate of a system's battery life under any conditions other than the specific test settings.

After a period of time, the battery will lose its ability to perform at maximum capacity and will need to be replaced. This is normal for all batteries.

[16] **Software**. Also see 64-Bit Computing Legal Footnote, if applicable.

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Some software may differ from its retail version (if available), and may not include user manuals or all program functionality.

[17] **Upconverter/UpconversionTechnology (Resolution+® Technology).** Viewing enhancements may vary depending upon content quality and display device capability/functionality/settings. Depending on the quality of the content, some video noise may be visible.

[18] **Intel® Wireless Display.** Copy protection technology, if any, associated with the content may prevent or limit viewing of content.

[19] **Microsoft® Officetrial** Buy Microsoft® Office to use full-featured Office software on this PC.

Microsoft® Software (if included in your PC; e.g., Microsoft Home and Student 2013, Microsoft Office Home and Business 2013, Microsoft Office Professional 2013)

The version of Microsoft® Office included in this computer is only available in and can only be activated within the region in which you purchased it.
Certain Microsoft® software products included with this computer may use technological measures for copy protection. In such case, you will not be able to use the Product if you do not activate it with Microsoft. Activation may be completed by Internet or telephone (toll charges may apply). Product Activation procedures and Microsoft's privacy policy will be detailed during initial launch of the Product, or upon certain reinstallations of the software products or reconfiguration of the computer.

[20] **Warranty.** The terms and conditions of Toshiba's standard limited warranty are available at www.warranty.toshiba.com.

[21] **RoHS.** This notebook is compatible with European Union Directive 2011/65/EU, Restriction of the use of certain Hazardous Substances in electrical and electronic equipment (RoHS), which restricts use of lead, cadmium, mercury, hexavalent chromium, PBB, and PBDE. Toshiba requires its notebook component suppliers to meet RoHS requirements and verifies its suppliers' commitment to meeting RoHS requirements by conducting component sampling inspections during the product design approval process.

[22] **Temperature (Environmental) Conditions**. All temperature references are approximate and the performance of your computer may vary from specifications even when operating within the recommended temperature range.

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